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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,616	02/28/2002	Duane Detwiler	105450-00009	1622

4372 7590 09/09/2003

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EXAMINER

GUTMAN, HILARY L

ART UNIT PAPER NUMBER

3612

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,616

Applicant(s)

DETWILER ET AL.

Examiner

Hilary Gutman

Art Unit

3612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/30/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 6, and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Futamata et al.

Futamata et al. disclose an impact reduction vehicle bumper system (Figures 3-4) comprising: at least two frame rails 1, 2 (only one of which is shown) mounted on a vehicle

Art Unit: 3612

body; at least two brackets 5, 5 (only one of which is shown) coupled respectively to the at least two frame rails; a beam 6 attached to the at least two brackets (Figure 3); a plate member 4 attached to the beam; and at least two frame rail extensions 13 indirectly coupled to the at least two brackets. Each bracket 5 of the at least two brackets is disposed between and directly connected to a first longitudinal end of a corresponding frame rail, and either one of a first longitudinal end and a second longitudinal end of the beam.

In addition, the plate member 4 has a U-shaped cross-section. The impact reduction system is a vehicle front bumper. The front bumper is mounted on a vehicle and it is believed that the vehicle meets ride height and fascia angle requirements for an alternative upper legform impactor test.

For claims 11 and 12, it is believed that if the bumper system as recited exhibits the adequate peak force (< 7.5 kN) and the adequate peak moment (< 510 Nm) then it would follow that other prior art bumper systems having the same features would also exhibit these characteristic results.

3. Claims 1, 6, and 11-14, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Hartel et al.

Hartel et al. disclose an impact reduction vehicle bumper system for a vehicle for reducing the force upon impact with an object comprising (Figures 1-2): at least two frame rails 3, 3, mounted on a vehicle body; at least two brackets 1,2 coupled respectively to the at least two frame rails; a beam 7 directly attached to the at least two brackets 1,2; a plate member 6 attached to the beam; and at least two frame rail extensions 22, 22 coupled to the at least two brackets.

Art Unit: 3612

Each bracket 1,2 of the at least two brackets is disposed between and directly connected to a first longitudinal end of a corresponding frame rail of the at least two frame rails and a first longitudinal end of the beam.

In addition, the plate member has a U-shaped cross-section. The impact reduction system is a vehicle front bumper. The front bumper is mounted on a vehicle and it is believed that the vehicle meets ride height and fascia angle requirements for an alternative upper legform impactor test.

For claims 11 and 12, it is believed that if the bumper system as recited exhibits the adequate peak force (< 7.5 kN) and the adequate peak moment (< 510 Nm) then it would follow that other prior art bumper systems having the same features would also exhibit these characteristic results.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 3612

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartel et al. as applied to claim 1 above and further in view of the well known prior art.

Hartel et al. disclose that the members of the bumper system are clearly not made of a plastic material (Column 1, lines 59-62). In addition, Hartel et al. disclose the plate member being metallic (Column 2, lines 1-2).

In addition, the brackets can be considered side brackets since the brackets are disposed on either side of the vehicle body (left and right).

However, Hartel et al. lack the plate member, beam, brackets, and frame rail extensions being made specifically of steel.

Composing bumper members of steel is well known in the prior art since steel provides high strength and collision-energy absorption, improved energy transfer characteristics, excellent durability and corrosion resistance, as well as having good formability and being lightweight.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the components of Hartel et al. out of steel as taught by the well known prior art in order to provide the bumper system of Hartel et al. with high strength and good shock absorption.

Hartel et al., as modified, also disclose the plate member 6 being welded to the beam 7.

Hartel et al., as modified, lack the other components being "welded" together.

It should be noted that the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (MPEP 2113).

7. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartel et al. as applied to claim 1 above and further in view of Goupy.

Hartel et al. lack the plate member having a multi-step U-shaped cross-section and more specifically a three-step U-shaped cross-section.

Goupy discloses an impact reduction vehicle bumper system for a vehicle for reducing the force upon impact with an object comprising (Figures 1-2 and 9): a beam 2 and a plate member 1 attached to the beam. The plate member has a frontal face 21 and upper and lower borders 22. The plate member also has a multi-step U-shaped cross-section and more specifically a three-step U-shaped cross-section (Figure 9). The purpose of this is to create a "ripple-bearing" which provides increased mechanical resistance characteristics and maximum bending moments to the bumper system when subjected to stress.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have created the plate member of Hartel et al. with a three-step (or multi-step) U-shaped cross-section in order to increase mechanical resistance and maximize the bending moments of the bumper system when subjected to stress.

8. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Futamata et al. as applied to claim 1 above and further in view of Shibuya et al.

Futamata et al. lack the frame rail extensions including an upper extension, a lower extension, and an inner extension and further lack the upper and lower extensions forming an angled box and the inner extension being disposed between the upper and lower extensions.

Shibuya et al. disclose an impact reduction vehicle bumper system for a vehicle for reducing the force upon impact with an object comprising: at least two frame rails 7 mounted on the vehicle body; at least two brackets 3, 45, coupled respectively to the at least two frame rails; a beam 5 indirectly attached to the at least two brackets; a plate member 11 attached to the beam; and at least two frame rail extensions 4 coupled to the at least two brackets. Each bracket 3, 45 of the at least two brackets is disposed between a first end of a corresponding frame rail, generally the forward most end of the rail, and a first end of the beam, which is generally the rearmost end.

The frame rail extensions 4 include an upper extension 21, a lower extension 31, and an inner extension 41. The upper and lower extensions 21, 31 form an angled box and the inner extension 41 is disposed between the upper and lower extensions.

Shibuya et al. teaches the desirability of this type of frame rail extension so that when a large impact energy acts upon the bumper system, the impact energy is quickly transferred to the chassis through the front end of the frame rail extension (Column 1, lines 45-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the frame rail extensions as taught by Shibuya et al. in place of those of Futamata et al. in order to provide a structure which can quickly transfer or redirect impact energy to the chassis through the front end of the frame rail extension when a large impact energy acts upon the bumper system.

Art Unit: 3612

Response to Arguments

9. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hilary Gutman whose telephone number is 703-305-0496. The examiner can normally be reached on M-F 7:30am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dayoan can be reached on 703-308-3102. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1134.

11. **Any response to this action should be mailed to:**

Assistant Commissioner for Patents
Washington, D.C. 20231

or faxed to:


(703) 305-3597, (for formal communications intended for entry)

or:

(703) 308-3297, (for informal or draft communications, please clearly label
"PROPOSED" or "DRAFT").

hlg

September 4, 2003


STEPHEN T. GORDON
PRIMARY EXAMINER